## NOV 0 9 2001 TECH CENTER 1600/2900

1646

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/525,998

DATE: 10/30/2001 TIME: 15:13:20

Input Set : A:\98385Eseq.txt

Output Set: N:\CRF3\10302001\I525998.raw

3 -: 110 > APPLICANT: Hauptmann, Rudolph Himmler, Adolph Maurer-Fogy, Ingrid Stratowa, Christian 8 :120> TITLE OF INVENTION: TNF Receptors, TNF Binding Proteins and DNAs Coding for 11 -: 130> FILE REFERENCE: 98,385-E 13 <140> CURRENT APPLICATION NUMBER: 09/525,998 14 -: 141: CURRENT FILING DATE: 2000-03-15 16 -: 150: PRIOR APPLICATION NUMBER: 08/383,676 17 (151) PRIOR FILING DATE: 1995-02-01 19 <150> PRIOR APPLICATION NUMBER: 08/153,287 20 <151> PRIOR FILING DATE: 1993-11-17 22 <150: PRIOR APPLICATION NUMBER: 07/821,750 23 <151> PRIOR FILING DATE: 1992-01-02 25 <150> PRIOR APPLICATION NUMBER: 07/511,430 26 <151> PRIOR FILING DATE: 1990-04-20 28 <160> NUMBER OF SEQ ID NOS: 87 30 <170> SOFTWARE: PatentIn Ver. 2.0 32 -: 210: SEQ ID NO: 1 33 <211> LENGTH: 1368 34 <212> TYPE: DNA 35 -: 213: ORGANISM: Homo sapiens 37 <220> FEATURE: 38 <221> NAME/KEY: CDS 39 <222> LOCATION: (1)..(1368) 41 <220> FEATURE: 42 <221> NAME/KEY: sig\_peptide 43 <222> LOCATION: (1)..(87) 45 <220> FEATURE: 46 <221> NAME/KEY: misc\_feature 47 <222> LOCATION: (88)..(120) 48 <223> OTHER INFORMATION: Portion of TNF-BP pro protein cleaved by extracellular proteases following secretion. 51 <220> FEATURE: 52 <221> NAME/KEY: misc\_feature 53 -(222> LOCATION: (606)..(633) 54 <223> OTHER INFORMATION: Portion of TNF-BP pro protein cleaved by 5.5 extracellular proteases following secretion. 57 <400> SEQUENCE: 1 58 atg ggc etc tec acc gtg ect gae etg etg etg eca etg gtg etc etg 48 59 Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu 60 1 10 62 gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga ctg gtc cct 63 Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro

66 cas sta ggg gas agg gag aag aga gat agt gtg tgt ses saa gga aaa

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RAW SEQUENCE LISTING
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| 67 F | His          | Leu    | Glv   | Asp   | Ara | Glu   | Lvs    | Ara   | Asp          | Ser    | Val   | Cvs   | Pro   | Gln   | Glv        | Lvs     |     |
|------|--------------|--------|-------|-------|-----|-------|--------|-------|--------------|--------|-------|-------|-------|-------|------------|---------|-----|
| 68   |              |        | 35    |       | ,   |       | -1-    | 40    |              |        |       | -1-   | 45    |       | 1          | -4-     |     |
| 70 t | tat          | atc    | cac   | cct   | caa | aat   | aat    | t.cg  | att          | tgc    | tgt   | acc   | aag   | tgc   | cac        | aaa     | 192 |
| 71 : | ryr          | Ile    | His   | Pro   | Gln | Asn   | Asn    | Ser   | Ile          | Cys    | Cys   | Thr   | Lys   | Cys   | His        | Lys     |     |
| 72   |              | 50     |       |       |     |       | 55     |       |              |        |       | 60    |       |       |            |         |     |
| 74   | gga          | acc    | tac   | ttg   | tac | aat   | gac    | tgt   | cca          | ggo    | ccg   | ggg   | cag   | gat   | acg        | gac     | 240 |
| 75 ( | Gly          | Thr    | Tyr   | Leu   | Tyr | Asn   | Asp    | Cys   | Pro          | Gly    | Pro   | Gly   | Gln   | Asp   | Thr        | Asp     |     |
| 76   | 65           |        |       |       |     | 70    |        |       |              |        | 75    |       |       |       |            | 80      |     |
| 78 t | tgc          | agg    | gag   | tgt   | gag | agc   | ggc    | tcc   | ttc          | acc    | gct   | tca   | gaa   | aac   | cac        | ctc     | 288 |
| 79 ( | Cys          | Arg    | Glu   | Cys   | Glu | Ser   | Gly    | Ser   | Phe          | Thr    | Ala   | Ser   | Glu   | Asn   | ${	t His}$ | Leu     |     |
| 80   |              |        |       |       | 85  |       |        |       |              | 90     |       |       |       |       | 95         |         |     |
|      |              |        |       | ctc   |     |       |        |       |              |        |       |       |       |       |            |         | 336 |
|      | Arg          | His    | Cys   | Leu   | Ser | Cys   | Ser    | Lys   |              | Arg    | Lys   | Glu   | Met   |       | Gln        | Val     |     |
| 84   |              |        |       | 100   |     |       |        |       | 105          |        |       |       |       | 110   |            |         | 20. |
| _    |              |        |       | tct   | _   |       |        |       |              |        |       |       |       |       |            |         | 384 |
|      | 31u          | He     |       | Ser   | Cys | Thr   | Val    |       | Arg          | Asp    | Thr   | val   |       | GLY   | Cys        | Arg     |     |
| 88   |              |        | 115   |       |     |       |        | 120   |              |        |       | -++   | 125   |       | +          | ++-     | 120 |
|      | _            |        | _     | tac   |     |       |        |       |              |        |       |       |       |       |            |         | 432 |
| 91 1 | Lys          |        | GIN   | Tyr   | Arg | HIS   | 135    | тгр   | ser          | GIU    | ASII  | 140   | Phe   | GIII  | СУБ        | Pne     |     |
|      | <del>+</del> | 130    | 200   | ctc   | tac | ctc   |        | aaa   | 200          | ata    | a a a |       | tac   | tac   | cac        | nan     | 480 |
|      |              |        |       | Leu   |     |       |        |       |              |        |       |       |       |       |            |         | 400 |
| 96   |              | Cys    | 261   | пец   | СуБ | 150   | ASII   | GIY   | T 111        | Val    | 155   | пец   | 361   | Cys   | GIII       | 160     |     |
|      |              | cad    | aac   | acc   | ata |       | acc    | tac   | cat          | αca    |       | ttc   | +++   | cta   | aga        |         | 528 |
|      |              |        |       | Thr   |     |       |        |       |              |        |       |       |       |       |            |         | 320 |
| 100  |              | 0111   |       | 1     | 165 |       |        | 010   |              | 170    |       |       |       |       | 17!        |         |     |
|      | aac          | gad    | ı tat | . atc |     |       | aqt    | aac   | tqt          |        |       | ago   | cto   | qaq   | tqq        | c acg   | 576 |
|      |              |        |       |       |     |       |        |       |              |        |       |       |       |       |            | s Thr   |     |
| 104  |              |        | -     | 180   |     | -     |        |       | 185          |        | _     |       |       | 190   |            |         |     |
| 106  | aag          | ttg    | g tgo | c cta | ccc | cag   | att    | gag   | r aat        | gtt    | aag   | ggg   | act   | gag   | gad        | c tca   | 624 |
| 107  | Lys          | Leu    | ı Cys | . Leu | Pro | Gln   | ılle   | e Glu | ı Asr        | va]    | Lys   | s Gly | 7 Thr | Glu   | ı Ası      | Ser     |     |
| 108  |              |        | 195   |       |     |       |        | 200   |              |        |       |       | 205   |       |            |         |     |
| 110  | ggc          | acc    | c aca | a gtg | ctg | ttg   | ccc    | ctg   | gto          | att    | tto   | : ttt | ggt   | ctt   | t tg       | c ctt   | 672 |
| 111  | Gly          | Thi    | Thi   | . Val | Leu | Leu   | ı Pro  | Lei   | ı Val        | . Ile  | Phe   | Phe   | e Gly | , Lei | и Суя      | s Leu   |     |
| 112  |              | 210    | )     |       |     |       | 215    | ,     |              |        |       | 220   | )     |       |            |         |     |
|      |              |        |       |       |     |       |        |       | _            |        | _     |       |       |       |            | g aag   | 720 |
|      |              |        | : Lei | ı Leu | Phe |       | _      | Lei   | ı Met        | Туз    |       | _     | Glr   | ı Arg | g Tr       | p Lys   |     |
| 116  |              |        |       |       |     | 230   |        |       |              |        | 235   |       |       |       |            | 240     | 7.0 |
|      |              |        |       |       |     |       |        |       |              |        |       |       |       |       |            | a gag   | 768 |
|      | Ser          | . TAS  | s Leu | ı Tyr |     |       | e Val  | . Суз | GLY          |        |       | r Thi | r Pro | o GIU |            | s Glu   |     |
| 120  |              |        |       |       | 245 |       | +      |       |              | 250    |       |       |       |       | 25!        |         | 016 |
|      |              |        |       | -     |     |       |        |       | _            |        | _     | -     |       |       |            | a agc   | 816 |
| 124  | СТУ          | GIU    | ı Let | 260   | _   | 1111  | . 1111 | 1111  | . цув<br>265 |        | льес  | HIC   | 1 PIC | 270   |            | o Ser   |     |
|      | ++~          | , ant  | - 000 |       |     | aaa   | . ++~  | . 200 |              |        | a cto | ı aar | . ++/ |       |            | c gtg   | 864 |
|      |              |        |       |       |     |       |        |       |              |        |       |       |       |       |            | o Val   | 504 |
| 128  | 1 110        |        | 275   |       | 110 | . 017 | 1 110  | 280   |              | . 1111 |       | . 01) | 285   |       |            | , , , , |     |
|      | ccc          | . aart |       |       | ttc | acc   | tac    |       |              | acc    | tat   | acc   |       |       | c qa       | c tgt   | 912 |
|      |              |        |       |       |     |       |        |       |              |        |       |       |       |       |            | o Cys   |     |
|      | ~            |        |       |       |     |       |        |       |              |        | -1-   |       |       |       | 1          | . 1     |     |

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| 132 |       | 290   |       |       |      |            | 295    |       |              |       |      | 300  |     |       |       |              |      |
|-----|-------|-------|-------|-------|------|------------|--------|-------|--------------|-------|------|------|-----|-------|-------|--------------|------|
|     |       |       |       |       |      | CCC        |        |       |              |       |      |      |     |       |       |              | 960  |
|     |       | Asn   | Phe   | Ala   | Ala  | Pro        | Arg    | Arg   | Glu          | Val   |      | Pro  | Pro | Tyr   | GIn   |              |      |
|     | 305   |       |       |       |      | 310        |        |       |              |       | 315  |      |     |       |       | 320          |      |
|     | _     | -     |       |       |      | gcg        |        | ~     |              | _     |      | -    |     |       |       |              | 1008 |
|     | Ala   | Asp   | Pro   | Ile   |      | Ala        | Thr    | Ala   | Leu          |       | Ser  | Asp  | Pro | lle   |       | Asn          |      |
| 140 |       |       |       |       | 325  |            |        |       |              | 330   |      |      |     |       | 335   |              | 1056 |
|     |       |       |       |       |      | gag        |        |       |              |       |      |      |     |       |       |              | 1056 |
|     | Pro   | Leu   | Gln   | -     | Trp  | Glu        | Asp    | Ser   |              | Hıs   | Lys  | Pro  | GIn |       | Leu   | Asp          |      |
| 144 |       |       |       | 340   |      |            |        |       | 345          |       |      |      |     | 350   |       |              | 1104 |
|     |       | -     | -     |       |      | acg        | _      |       | -            |       |      |      |     |       |       | _            | 1104 |
|     | Thr   | Asp   | _     | Pro   | АТА  | Thr        | Leu    | _     | Ата          | val   | val  | GIU  |     | val   | PIO   | PIO          |      |
| 148 | ++-   |       | 355   |       |      | ++~        | ~+~    | 360   | ~~~          | at a  | ~~~  | ata  | 365 | a 2 a | 000   | ~            | 1150 |
|     |       |       |       |       |      | ttc        |        |       |              |       |      |      |     |       |       |              | 1152 |
|     | Leu   | _     | ттр   | ьуs   | GIU  | Phe        | 375    | Arg   | Arg          | цец   | СТУ  | 380  | ser | Asp   | HIS   | GIU          |      |
| 152 | 2 t 2 | 370   | 000   | ata   | ~~~  | ata        |        | 229   | <i>a a a</i> | 99.3  | taa  |      | 200 | a 2 a | aaa   | <b>a</b> a a | 1200 |
|     |       |       |       |       |      | ctg        |        |       |              |       |      |      |     |       |       |              | 1200 |
| 156 |       | ASP   | Arg   | Leu   | GIU  | Leu<br>390 | GIII   | ASII  | GIY          | Arg   | 395  | ьец  | AIG | GIU   | Ата   | 400          |      |
|     |       | 200   | 2+4   | ata   | aca  | acc        | + a a  | 3 T T | aaa          | aaa   |      | aaa  | caa | aaa   | a a a |              | 1248 |
|     |       | _     | _     | _     |      | Thr        |        |       |              | _     | _    | _    |     | _     |       | _            | 1240 |
| 160 | 1 Y 1 | JCI   | IIC C | пси   | 405  | 1111       | 111    | ni 9  | Arg          | 410   | 1111 | 110  | nry | mry   | 415   | mu           |      |
|     | aca   | cta   | gag   | cta   |      | gga        | cac    | ata   | ctc          |       | aac  | ato  | gac | cta   |       | aac          | 1296 |
|     |       |       |       |       |      | Gly        |        |       |              |       |      |      |     |       |       |              | 1230 |
| 164 | ± 111 | псч   | 014   | 420   | псч  |            | **** 9 | , u _ | 425          | *** 9 | 11DP | 1100 | пър | 430   | Lea   |              |      |
|     | tac   | cta   | ααα   |       | atc  | gag        | gag    | aca   |              | tac   | aac  | CCC  | acc |       | ata   | cca          | 1344 |
|     |       |       |       |       |      | Glu        |        |       |              |       |      |      |     |       |       |              |      |
| 168 | 012   | 200   | 435   |       |      |            |        | 440   |              | -1-   | 1    |      | 445 |       |       |              |      |
|     | ccc   | aca   |       | aσt   | ctt  | ctc        | aσa    | tσa   |              |       |      |      |     |       |       |              | 1368 |
|     |       |       |       | -     |      | Leu        | _      | - )   |              |       |      |      |     |       |       |              |      |
| 172 |       | 450   |       |       |      |            | 455    |       |              |       |      |      |     |       |       |              |      |
|     | <210  | )> SI | EQ II | ON C  | : 2  |            |        |       |              |       |      |      |     |       |       |              |      |
| 176 | <213  | l> LE | ENGTH | I: 45 | 55   |            |        |       |              |       |      |      |     |       |       |              |      |
| 177 | <212  | 2> TY | YPE:  | PRT   |      |            |        |       |              |       |      |      |     |       |       |              |      |
| 178 | <213  | 3> OF | RGANI | SM:   | Homo | o sag      | piens  | 3     |              |       |      |      |     |       |       |              |      |
| 180 | <400  | )> SI | EQUE  | VCE:  | 2    |            |        |       |              |       |      |      |     |       |       |              |      |
| 181 | Met   | Gly   | Leu   | Ser   | Thr  | Val        | Pro    | Asp   | Leu          | Leu   | Leu  | Pro  | Leu | Val   | Leu   | Leu          |      |
| 182 | 1     |       |       |       | 5    |            |        |       |              | 10    |      |      |     |       | 15    |              |      |
| 184 | Glu   | Leu   | Leu   | Val   | Gly  | Ile        | Tyr    | Pro   | Ser          | Gly   | Val  | Ile  | Gly | Leu   | Val   | Pro          |      |
| 185 |       |       |       |       |      |            |        |       |              |       |      |      |     | 30    |       |              |      |
| 187 | His   | Leu   | Gly   | Asp   | Arg  | Glu        | Lys    | Arg   | Asp          | Ser   | Val  | Cys  | Pro | Gln   | Gly   | Lys          |      |
| 188 |       |       | 35    |       |      |            |        | 40    |              |       |      |      | 45  |       |       |              |      |
|     |       |       | His   | Pro   | Gln  | Asn        |        | Ser   | Ile          | Cys   | Cys  |      | Lys | Cys   | His   | Lys          |      |
| 191 |       | 50    |       |       |      |            | 55     |       |              |       |      | 60   |     |       |       |              |      |
|     |       | Thr   | Tyr   | Leu   | Tyr  | Asn        | Asp    | Cys   | Pro          | Gly   |      | Gly  | Gln | Asp   | Thr   |              |      |
| 194 | 65    |       |       | _     |      | 70         |        | _     |              |       | 75   | _    |     |       |       | 80           |      |
|     | Cys   | Arg   | Glu   | Cys   |      | Ser        | Gly    | Ser   | Phe          |       | Ala  | Ser  | Glu | Asn   |       | Leu          |      |
| 197 | _     |       | -     | _     | 85   | ~          | _      | _     | _            | 90    | _    |      |     | a :   | 95    |              |      |
| 199 | Arg   | His   | Cys   | Leu   | Ser  | Cys        | Ser    | Lys   | Cys          | Arg   | Lys  | Glu  | Met | GLy   | Gln   | Val          |      |

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| Second   S | 200 |             |       |       | 100   |       |       |       |               | 105  |       |        |      |       | 110    |       |            |
|--|-----|-------------|-------|-------|-------|-------|-------|-------|---------------|------|-------|--------|------|-------|--------|-------|------------|
| 120  |     | Glu         | Tle   | Ser   |       | Cvs   | Thr   | Val   | Asp           |      | Asp   | Thr    | val  | Cvs   |        | Cvs   | Ara        |
| 100  |     | 31 u        | 110   |       | DCI   | CYB   | 1111  | vai   |               | mry  | пър   | 1,111  | 141  |       | O I y  | ~ y D | 111 9      |
| 130  |     | Lve         | Δsn   |       | ጥህጉ   | Ara   | His   | Tur   |               | Ser  | Glu   | Asn    | T.eu |       | Gln    | Cvs   | Phe        |
| Name   |     | цуз         |       | OIII  | + 1 + | 111.9 | 1110  |       | 111           | DCI  | Olu   | 11011  |      | 1110  | 0111   | 010   | 1 110      |
| 145  |     | <b>N</b> cn | _     | Sar   | Len   | Cuc   | Leu   |       | <i>(</i> 21 v | Фhr  | Val   | Hic    |      | Ser   | Cvc    | Gln   | Glu        |
| 1  |     |             | Cys   | 561   | пец   | CYS   |       | VPII  | этү           | 1111 | Val   |        | пси  | 501   | CYS    | OIII  |            |
| 165  |     |             | Cln   | 7 cn  | Пhr   | Wal   |       | Thr   | Cvc           | Hic  | λla   |        | Dho  | Dho   | T.e.11 | Δra   |            |
| Ash   Glu   Cys   Val   Ser   Cys   Ser   Ash   Cys   Lys   Lys   Ser   Leu   Glu   Cys   Thr   180   190  |     | цуз         | GIII  | ASII  | 1111  |       | Cys   | T 111 | CYS           | 1113 |       | Gry    | TITC | TITC  | шси    |       | Giu        |
| 180  |     | λαη         | Clu   | Cvc   | W-1   |       | Cuc   | Sar   | Acn           | Cvc  |       | Tuc    | Car  | Len   | Glu    |       | Thr        |
| 217   Lys   Leu   Cys   Leu   Pro   Gln   Ile   Glu   Asn   Val   Lys   Gly   Thr   Glu   Asp   Ser   195   200   205  |     | ASII        | Giu   | Cys   |       | 261   | Cys   | 501   | Maii          |      | цуз   | цуз    | 501  | DC. G |        | -ys   | 1111       |
| 195   200   205   205   205   206   216   210  |     | Luc         | Leu   | Cvs   |       | Pro   | Gln   | Tle   | aln           |      | Val   | Lvs    | Glv  | Thr   |        | Asn   | Ser        |
| Color   Colo |     | цуз         | пеа   | _     | пец   | FIO   | GIII  | 110   |               | Non  | Val   | шүз    | Gry  |       | GIU    | пор   | DCI        |
| 221  |     | /7 1 57     | Thr   |       | Val   | T 411 | T All | Dro   |               | Val  | Ιlο   | Dhe    | Dhe  |       | T.e.11 | Cvc   | T.e.11     |
| 223   Leu   Ser   Leu   Leu   Phe   Ile   Gly   Leu   Met   Tyr   Arg   Tyr   Gln   Arg   Trp   Lys   240   226   Ser   Lys   Lys   Ser   14   Val   Cys   |     | Gry         |       | 1111  | vai   | TIC U | ьеu   |       | пеп           | val  | 116   | rne    |      | СТУ   | шеш    | Cys   | шец        |
| 224   225  |     | Len         |       | Tau   | Tan   | Dha   | Tlo   |       | Leu           | Mot  | Фυν   | λτα    |      | Gln   | λrσ    | Ψкъ   | Lvc        |
| 226   Ser Lys   Lys   Lys   Tyr   Ser   11e   Val   Cys   Cys   Lys   Ser   Thr   Pro   Glu   Lys   Glu   255     229   Gly   Glu   Leu   Glu   Gly   Thr   Thr   Thr   Lys   Pro   Leu   Ala   Pro   Asn   Pro   Ser   270     230   Phe   Ser   Pro   Thr   Pro   Gly   Phe   Ser   270   Pro   280     233   275   Pro   Ser   Ser   Thr   Pro   Pro   Pro   Pro   Ser   280     235   Pro   Ser   Ser   Thr   Pro   Pro   Pro   Pro   Ser   Ser   Ser   Ser   Thr   Thr   Pro   Gly   Asp   Cys     236   290   Ser   Ser   Ser   Ser   Ser   Ser   Thr   Thr   Pro   Pro   Pro   Thr   Gly     239   305   Ser    |     |             | 261   | шеа   | пец   | FILE  |       | Gry   | шеа           | Mec  | 1 7 1 |        | TYT  | GIII  | пту    | 1112  |            |
| 227   245   245   250   250   255   259   255   229   319   310  |     |             | Luc   | Leu   | Тиг   | Ser   |       | Val   | Cvc           | Glv  | Lve   |        | Фhr  | Pro   | Glu    | Lve   |            |
| 229 Gly Glu Leu Glu Gly Thr Thr Thr Lys Pro Leu Ala Pro Asn Pro Ser 230  |     | 261         | цуз   | шец   | тут   |       | 116   | Val   | Cys           | GIY  | _     | 261    | 1111 | 110   | Giu    | _     | Giu        |
| 230   260   260   265   265   270   270   232   284   285   275   280   285  |     | C137        | Clu   | Тан   | Clu   |       | Thr   | Thr   | Thr           | Lvc  |       | T All  | λ1 = | Pro   | Aen    |       | Ser        |
| 232   Phe   Ser   Pro   Thr   Pro   Cly   Phe   Thr   Pro   Thr   Leu   Cly   Phe   Ser   Pro   Val   233   Pro   275   Pro   275   Pro   280   Pro   280   Pro   285   Pro   285   Pro   235   Pro   290   Pro  |     | Эту         | Giu   | шец   |       | Gry   | 1111  | T 111 | 1111          |      | 110   | шец    | пта  | 110   |        | 110   | DCI        |
| 233  |     | Dhe         | Ser   | Pro   |       | Pro   | Glv   | Phe   | Thr           |      | Thr   | T.e.11 | Glv  | Phe   |        | Pro   | Val        |
| 235  |     | inc         | 501   |       | T 11T | 110   | GLY   | THE   |               | 110  | 1111  | пса    | OLY  |       | 501    | 110   | <b>v</b> a |
| 236  |     | Dro         | Sar   |       | Пhr   | Dha   | ሞክዮ   | Sar   |               | Ser  | Thr   | ጥህጉ    | Пhr  |       | Glv    | Aen   | Cve        |
| 238   Pro   Asn   Phe   Ala   Ala   Pro   Arg   Arg   Clu   Val   Ala   Pro   Pro   Tyr   Cln   Cly   239   305  |     | FIO         |       | 261   | 1111  | rne   | 1111  |       | 561           | JCI  | 1111  | 1 Y 1  |      | 110   | Gry    | usb   | Cyb        |
| 310  |     | Pro         |       | Phe   | Δla   | Δla   | Pro   |       | Δrσ           | Glu  | Val   | Δla    |      | Pro   | Ψvr    | Gln   | Glv        |
| 241 Ala Asp Pro Ile Leu Ala Thr Ala Leu Ala Ser Asp Pro Ile Pro Asn 242  |     |             | 11511 | 1110  | mu    | mu    |       | 111 9 | **** 9        | Olu  | , aı  |        | 110  | 110   | - 1 -  | 0111  |            |
| 242 Pro Leu Gln Lys Trp Glu Asp Ser Ala His Lys Pro Gln Ser Leu Asp 245  |     |             | Asn   | Pro   | Tle   | T.eu  |       | Thr   | Ala           | T.eu | Ala   |        | Asp  | Pro   | Tle    | Pro   |            |
| 244 Pro Leu Gln Lys Trp Glu Asp Ser Ala His Lys Pro Gln Ser Leu Asp 245  |     | niu         | пор   | 110   | 110   |       | mu    | 1111  | mu            | пса  |       | DCI    | no p | 110   | 110    |       | 11011      |
| 245  |     | Pro         | Leu   | Gln   | Lvs   |       | Glu   | Asp   | Ser           | Ala  |       | Lvs    | Pro  | Gln   | Ser    |       | Asp        |
| 247 Thr Asp Asp Pro Ala Thr Leu Tyr Ala Val Glu Asn Val Pro Pro 248  |     | 110         | пса   | 0111  |       |       | 014   | 1105  | 001           |      | 1110  | 1110   | 110  | 0111  |        |       |            |
| 248  |     | Thr         | Asp   | Asp   |       | Ala   | Thr   | Leu   | Tvr           |      | Val   | Val    | Glu  | Asn   |        | Pro   | Pro        |
| 250   Leu   Arg   Trp   Lys   Glu   Phe   Val   Arg   Arg   Leu   Gly   Leu   Ser   Asp   His   Glu   Ser   370   370   375   375   575   380  |     |             | p     |       | 110   |       |       | 200   |               |      |       | , 42   | 014  |       | , 41   |       |            |
| 251  |     | Leu         | Ara   |       | Lvs   | Glu   | Phe   | Val   |               | Ara  | Leu   | Glv    | Leu  |       | Asp    | His   | Glu        |
| 253 Ile Asp Arg Leu Glu Leu Gln Asn Gly Arg Cys Leu Arg Glu Ala Gln 254 385  |     | 204         |       |       | 270   | 014   |       |       | 5             | 9    |       | 0 + 1  |      |       | ···- F |       |            |
| 254 385  |     | He          | Asp   | Ara   | Leu   | Glu   | Leu   |       | Asn           | Glv  | Arσ   | Cvs    |      | Ara   | Glu    | Ala   | Gln        |
| 256 Tyr Ser Met Leu Ala Thr Trp Arg Arg Thr Pro Arg Arg Glu Ala 257  |     |             | p     | *** 5 | Leu   | Olu   |       | 01    |               |      | 5     |        | 200  | •••   |        |       |            |
| 257 Thr Leu Glu Leu Leu Gly Arg Val Leu Arg Asp Met Asp Leu Leu Gly 260  |     |             | Ser   | Met   | Leu   | Ala   | Thr   | Trp   | Arq           | Arg  | Ara   |        | Pro  | Arg   | Ara    | Glu   | Ala        |
| 259 Thr Leu Glu Leu Leu Gly Arg Val Leu Arg Asp Met Asp Leu Leu Gly 260  |     | -1-         |       |       |       |       |       |       | 5             | 9    |       |        |      | 5     | 9      |       |            |
| 260 420 425 430  262 Cys Leu Glu Asp Ile Glu Glu Ala Leu Cys Gly Pro Ala Ala Leu Pro 263 435 440 440 445  265 Pro Ala Pro Ser Leu Leu Arg 266 450 455  269 <210> SEQ ID NO: 3  270 <211> LENGTH: 483  271 <212> TYPE: DNA  |     | Thr         | Leu   | Glu   | Leu   | Leu   | Glv   | Arσ   | Val           | Leu  | Ara   | Asp    | Met  | asA   | Leu    | Leu   | Gly        |
| 262 Cys Leu Glu Asp Ile Glu Glu Ala Leu Cys Gly Pro Ala Ala Leu Pro 263 435 440 445  265 Pro Ala Pro Ser Leu Leu Arg 266 450 450 455  269 <210> SEQ ID NO: 3 270 <211> LENGTH: 483 271 <212> TYPE: DNA   |     |             |       |       |       |       |       | 5     |               |      | 5     | 1      |      |       |        |       | _          |
| 263 435 440 445 265 Pro Ala Pro Ser Leu Leu Arg 266 450 455 269 (210> SEQ ID NO: 3 270 (211> LENGTH: 483 271 (212> TYPE: DNA   |     | Cvs         | Leu   | Glu   |       | Ile   | Glu   | Glu   | Ala           |      | Cvs   | Glv    | Pro  | Ala   |        | Leu   | Pro        |
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|  | 272 | <:21        | 3> 01 | RGAN  | ISM:  | Homo  | o sar | piens | 5             |      |       |        |      |       |        |       |            |

RAW SEQUENCE LISTING DATE: 10/30/2001 PATENT APPLICATION: US/09/525,998 TIME: 15:13:20

Input Set : A:\98385Eseq.txt

Output Set: N:\CRF3\10302001\I525998.raw

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278 <400> SEQUENCE: 3
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280 Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser
                                          1.0
                                                                       96
283 att tgc tgt acc aag tgc cac aaa gga acc tac ttg tac aat gac tgt
284 1le Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys
285
                 20
                                     25
                                                                       144
287 dealgge deg ggg cag gat acg gad tgd agg gag tgt gag agd ggd ted
288 Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser
                                 40
                                                                       192
291 tto acc got toa gaa aac cac etc aga cac tgo etc ago tgo too aaa
292 Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys
                             55
        50
295 tgc cga aag gaa atg ggt cag gtg gag atc tct tct tgc aca gtg gac
                                                                       240
296 Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp
                         70
                                              75
297
                                                                       288
299 egg gae ace gtg tgt gge tge agg aag aac eag tae egg cat tat tgg
300 Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp
                     8.5
                                          90
303 agt gaa aac ctt ttc cag tgc ttc aat tgc agc ctc tgc ctc aat ggg
                                                                       336
304 Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly
305
                100
                                    105
307 acc gtg cac ctc tcc tgc cag gag aaa cag aac acc gtg tgc acc tgc
                                                                        384
308 Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys
311 cat gca ggt ttc ttt cta aga gaa aac gag tgt gtc tcc tgt agt aac
                                                                       432
312 His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn
313
       130
                            135
315 tgt aag aaa agc ctg gag tgc acg aag ttg tgc cta ccc cag att gag
                                                                       480
316 Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu
317 145
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319 aat
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320 Asn
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325 <212> TYPE: PRT
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332 Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys
333
                 20
335 Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser
336
             35
                                  40
338 Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys
339
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                             55
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Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/525,998

DATE: 10/30/2001 TIME: 15:13:21

Input Set : A:\98385Eseq.txt

Output Set: N:\CRF3\10302001\I525998.raw

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L:1548 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
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